

Texas Water Development Board



WATER
Conditions

RESERVOIR STORAGE

October 2010

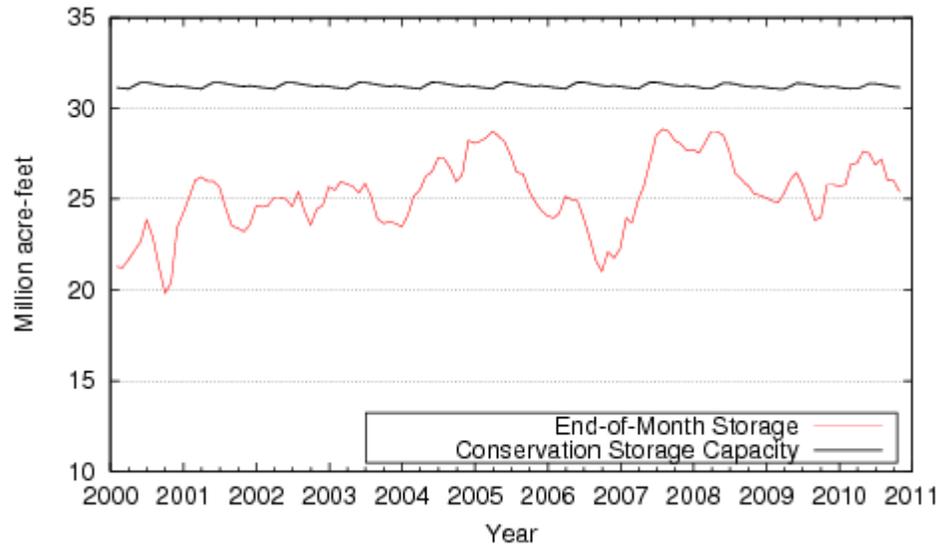
At the end of October, total storage in the state's 109 major reservoirs was at 25.4 million acre-feet, or 82% of the total conservation storage capacity. This is 0.6 million acre-feet less than a month ago.

Storage was at 100% in 8 reservoirs, 12 less than last month. Five lakes were at or below 10% full: O. C. Fisher Lake Reservoir was effectively empty, Lake Meredith (total) was at 1%, E.V. Spence Reservoir was at 4%, Lake J. B. Thomas was at 6%, and Lake Electra at 8% full.

Three regions had combined storage above 90%: North Central 90%, Upper Coast 95%, and Southern 97%. The High Plains (6%) and Trans-Pecos regions (18%) remained very low. Storage decreased in all except the Southern region over the month. Over the 12-month period, storage increased in 4 but decreased in 5 regions.

* Only the Texas share of storage in border reservoirs is counted.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Figures are based on the end of the month data at 109 major reservoirs that represent 95 percent of the total conservation storage capacity of the 175 major water supply reservoirs in Texas. Reservoirs with a conservation storage capacity of 5,000 acre-feet or greater are included.

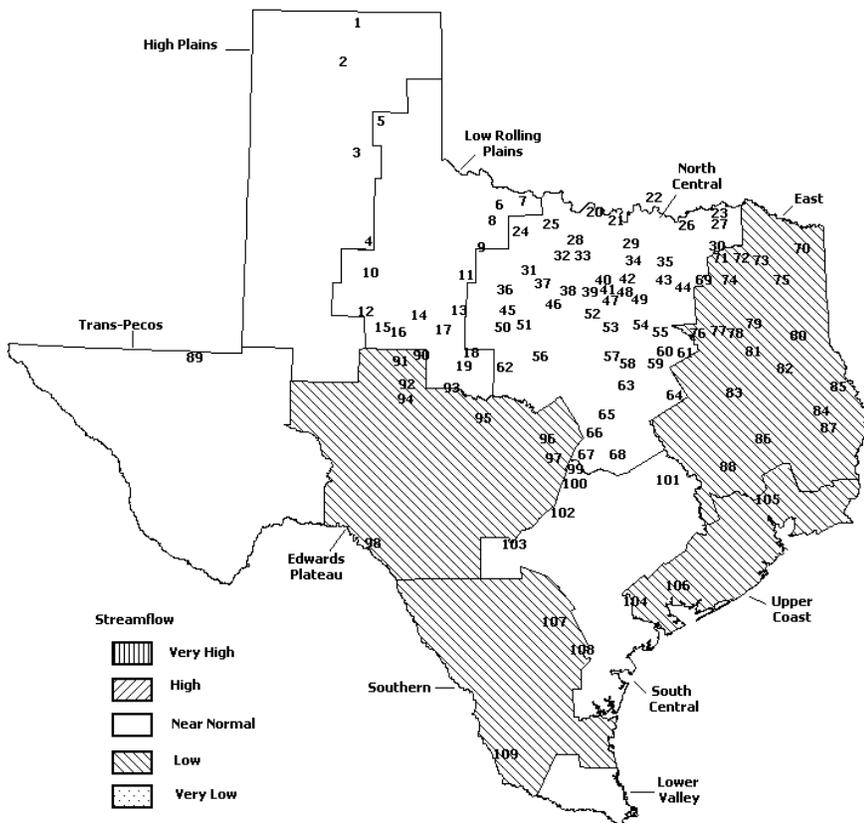
STREAMFLOW

Of 29 reporting index stations in October, computed 30-day mean flows were high (5% - 30%) at 1 station, low (70% - 95%) at 14 stations, very low (>95%) at 1 station, and near normal (30% - 70%) at the remaining 13 stations. Compared to September, flows have increased at 6 index stations and decreased at 23 stations.

On a regional basis, flows in October were low in the Southern, Upper Coast, East Texas, and Edwards Plateau regions, and near normal everywhere else. Streamflow in the Lower Valley region is not monitored.

OCTOBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



1. Palo Duro Reservoir
2. Meredith, Lake
3. MacKenzie Reservoir
4. White River Lake
5. Greenbelt Lake
6. Electra, Lake
7. N. Fork Buffalo Creek Reservoir
8. Kemp, Lake
9. Miller's Creek Reservoir
10. Alan Henry Reservoir
11. Stamford, Lake
12. Lake J. B. Thomas
13. Fort Phantom Hill, Lake
14. Sweetwater, Lake
15. Colorado City, Lake
16. Champion Creek Reservoir
17. Abilene, Lake
18. Coleman, Lake
19. Hords Creek Lake
20. Farmers Creek Reservoir
21. Hubert H Moss Lake
22. Texoma, Lake
23. Pat Mayse Lake
24. Lake Kickapoo
25. Lake Arrowhead
26. Bonham, Lake
27. Crook, Lake
28. Amon G Carter, Lake
29. Ray Roberts, Lake
30. Jim Chapman Lake
31. Graham, Lake
32. Lost Creek Reservoir
33. Bridgeport Reservoir
34. Lewisville Lake
35. Lavon Lake
36. Hubbard Creek Reservoir
37. Possum Kingdom Lake
38. Mineral Wells, Lake
39. Weatherford, Lake
40. Eagle Mountain Lake
41. Worth, Lake
42. Grapevine Lake
43. Lake Ray Hubbard
44. New Terrell City Lake
45. Daniel, Lake
46. Palo Pinto, Lake
47. Benbrook Lake
48. Arlington, Lake
49. Joe Pool Lake
50. Cisco, Lake
51. Leon, Lake
52. Lake Granbury
53. Pat Cleburne, Lake
54. Waxahachie, Lake
55. Bardwell Lake
56. Proctor Lake
57. Whitney Lake
58. Aquilla Lake
59. Navarro Mills Lake
60. Halbert, Lake
61. Richland-Chambers Reservoir
62. Lake Brownwood
63. Waco Lake
64. Limestone, Lake
65. Belton Lake
66. Stillhouse Hollow Lake
67. Georgetown, Lake
68. Granger Lake
69. Tawakoni, Lake
70. Wright Patman Lake
71. Sulphur Springs, Lake
72. Cypress Springs, Lake
73. Bob Sandlin, Lake
74. Fork Reservoir, Lake
75. O' the Pines, Lake
76. Cedar Creek Reservoir Trinity
77. Athens, Lake
78. Palestine, Lake
79. Tyler, Lake
80. Murvaul, Lake
81. Jacksonville, Lake
82. Nacogdoches, Lake
83. Houston County Lake
84. Sam Rayburn Reservoir
85. Toledo Bend Reservoir
86. Livingston, Lake
87. B. A. Steinhagen Lake
88. Conroe, Lake
89. Red Bluff Reservoir
90. Oak Creek Reservoir
91. E. V. Spence Reservoir
92. O. C. Fisher Lake
93. O. H. Ivie Reservoir
94. Twin Buttes Reservoir
95. Brady Creek Reservoir
96. Buchanan, Lake
97. Lyndon B Johnson, Lake
98. Amistad Reservoir, Intl.
99. Travis, Lake
100. Austin, Lake
101. Somerville Lake
102. Canyon Lake
103. Medina Lake
104. Coletto Creek Reservoir
105. Lake Houston
106. Texana, Lake
107. Choke Canyon Reservoir
108. Lake Corpus Christi
109. Falcon Reservoir, Intl.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage		Change since Late September 2010		Change since Late October 2009		
		Capacity (acre-feet)	Late Oct. (acre-feet)	2010 (%)	2010 (acre-feet)	(%)	2009 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	16,324	27	-2,251	-4	15,848	26
Meredith, Lake (Texas)	2	500,000	6,191	1	-4,371	-1	-26,457	-5
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	6,191	1	-4,371	-1	-26,457	-3
MacKenzie Reservoir	3	46,429	6,309	14	-108	0	362	1
White River Lake	4	29,880	10,821	36	212	1	7,475	25
TOTAL		637,206	39,645	6	-6,518	-1	-2,772	0
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	16,439	28	-224	0	1,011	2
*Electra, Lake	6	5,626	459	8	-59	-1	-48	-1
N. Fork Buffalo Crk Reservoir	7	15,400	6,560	43	-357	-2	2,180	14
Kemp, Lake	8	245,308	245,308	100	0	0	85,298	35
Millers Creek Reservoir	9	27,888	20,275	73	-799	-3	7,401	27
Alan Henry Reservoir	10	94,808	92,122	97	-1,638	-2	4,142	4
Stamford, Lake	11	51,570	51,570	100	0	0	15,056	29
J B Thomas, Lake	12	199,931	12,546	6	-988	0	2,460	1
Fort Phantom Hill, Lake	13	70,030	63,046	90	-74	0	13,398	19
Sweetwater, Lake	14	10,006	5,876	59	-120	-1	-120	-1
Colorado City, Lake	15	31,793	15,411	48	-590	-2	-2,652	-8
Champion Creek Reservoir	16	41,618	7,098	17	-155	0	306	1
Abilene, Lake	17	6,099	5,256	86	-255	-4	3,256	53
Coleman, Lake	18	38,076	22,268	58	-567	-1	120	0
Hords Creek Lake	19	5,684	576	10	-116	-2	-984	-17
TOTAL		903,337	564,810	63	-5,942	-1	130,824	14
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	19,194	90	-423	-2	-514	-2
Hubert H Moss Lake	21	24,058	23,620	98	-171	-1	-438	-2
Texoma, Lake (Texas)	22	1,315,070	1,245,955	95	11,788	1	-69,115	-5
Texoma, Lake (Texas & Oklahoma)	(22)	2,630,141	2,491,911	95	23,576	1	-138,230	-5
*Pat Mayse Lake	23	117,844	105,550	90	-2,353	-2	-12,550	-11
Kickapoo, Lake	24	85,825	75,115	88	-2,377	-3	28,980	34
Arrowhead, Lake	25	235,997	202,669	86	-2,665	-1	46,159	20
Bonham, Lake	26	11,026	9,998	91	-472	-4	-1,028	-9
Crook, Lake	27	9,195	7,721	84	-90	-1	-1,474	-16
Amon G Carter, Lake	28	19,903	18,365	92	-725	-4	-594	-3
Ray Roberts, Lake	29	798,758	782,199	98	-16,559	-2	-16,559	-2
Jim Chapman Lake (Cooper)	30	260,332	170,123	65	-10,884	-4	-90,209	-35
Graham, Lake	31	45,260	43,820	97	-1,049	-2	5,899	13
*Lost Creek Reservoir	32	11,950	11,314	95	-228	-2	-534	-4
Bridgeport, Lake	33	366,236	347,902	95	-6,638	-2	74,927	20
Lewisville Lake	34	563,228	546,428	97	-16,800	-3	2,440	0
Lavon Lake	35	443,844	334,207	75	-17,138	-4	-109,637	-25
Hubbard Creek Reservoir	36	318,067	201,930	63	809	0	-12,253	-4
Possum Kingdom Lake	37	540,340	520,955	96	5,186	1	51,615	10
*Mineral Wells, Lake	38	7,065	6,736	95	-290	-4	-205	-3
Weatherford, Lake	39	17,789	15,575	88	-730	-4	-191	-1
Eagle Mountain Lake	40	179,880	170,127	95	-8,636	-5	-7,829	-4
Worth, Lake	41	24,500	18,468	75	-3,573	-15	-3,910	-16
Grapevine Lake	42	164,702	161,505	98	-3,197	-2	-3,197	-2
Ray Hubbard, Lake	43	452,040	386,893	86	-10,923	-2	-65,147	-14
New Terrell City Lake	44	8,583	7,035	82	-242	-3	-1,548	-18
Daniel, Lake	45	9,435	5,216	55	-324	-3	763	8
Palo Pinto, Lake	46	26,827	24,972	93	-1,725	-6	4,221	16
Benbrook Lake	47	85,648	75,443	88	-1,644	-2	-10,205	-12
Arlington, Lake	48	40,156	37,020	92	-3,136	-8	-1,720	-4

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late September 2010		Change since Late October 2009		
			Late Oct. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	141,754	99	-1,107	-1	-1,107	-1	
*Cisco, Lake	50	26,000	14,889	57	-339	-1	-2,081	-8	
Leon, Lake	51	26,421	17,283	65	-573	-2	-950	-4	
Granbury, Lake	52	128,046	124,421	97	-982	-1	604	0	
Pat Cleburne, Lake	53	26,008	25,136	97	-872	-3	-594	-2	
Waxahachie, Lake	54	10,779	9,159	85	-814	-8	-1,620	-15	
Bardwell Lake	55	46,122	45,410	98	-712	-2	-712	-2	
Proctor Lake	56	55,457	34,823	63	-2,263	-4	7,341	13	
Whitney, Lake	57	553,349	452,606	82	-65,567	-12	-73,147	-13	
Aquilla Lake	58	44,460	43,790	98	-670	-2	-1,302	-3	
Navarro Mills Lake	59	49,826	47,364	95	-2,044	-4	-8,453	-17	
*Halbert, Lake	60	6,033	3,770	62	-236	-4	-1,770	-29	
Richland-Chambers Reservoir	61	1,087,839	1,023,789	94	-25,465	-2	-80,027	-7	
*Brownwood, Lake	62	131,429	83,832	64	-3,385	-3	-6,256	-5	
Waco, Lake	62	198,943	195,692	98	-3,251	-2	-3,251	-2	
Limestone, Lake	64	208,015	174,837	84	-9,810	-5	-32,568	-16	
Belton Lake	65	435,225	404,214	93	-6,758	-2	-31,011	-7	
Stillhouse Hollow Lake	66	227,771	227,004	100	-767	0	-767	0	
Georgetown, Lake	67	36,823	36,823	100	0	0	0	0	
Granger Lake	68	50,779	42,889	84	-71	0	-9,636	-19	
Tawakoni, Lake	69	888,126	783,116	88	-14,298	-2	-105,010	-12	
TOTAL		10,585,315	9,508,656	90	-235,193	-2	-546,170	-5	
EAST									
Wright Patman Lake	70	135,249	135,249	100	-100,387	-74	0	0	
*Sulphur Springs, Lake	71	17,838	10,760	60	-1,148	-6	-7,078	-40	
Cypress Springs, Lake	72	66,756	62,465	94	31	0	-5,224	-8	
Bob Sandlin, Lake	73	200,579	172,107	86	-4,554	-2	-28,472	-14	
Fork Reservoir, Lake	74	604,927	532,446	88	-12,294	-2	-72,481	-12	
O the Pines, Lake	75	238,933	236,312	99	-2,621	-1	-2,621	-1	
Cedar Creek Reservoir in Trinity	76	644,686	565,653	88	-16,053	-2	-79,033	-12	
Athens, Lake	77	29,435	26,242	89	-675	-2	-3,193	-11	
Palestine, Lake	78	370,907	324,015	87	-10,286	-3	-46,892	-13	
Tyler, Lake	79	73,256	63,940	87	-3,391	-5	-9,316	-13	
Murvault, Lake	80	38,284	30,862	81	-676	-2	-7,422	-19	
Jacksonville, Lake	81	25,670	22,843	89	-435	-2	-7,457	-29	
Nacogdoches, Lake	82	39,521	29,893	76	-1,286	-3	-9,628	-24	
Houston County Lake	83	17,113	15,009	88	-674	-4	-1,951	-11	
Sam Rayburn Reservoir	84	2,857,077	1,991,251	70	-95,412	-3	-663,543	-23	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,593,641	71	-52,794	-2	-642,809	-29	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,187,282	71	-105,588	-2	-1,285,618	-29	
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0	
B A Steinhagen Lake	87	66,966	61,321	92	1,311	2	4,872	7	
Conroe, Lake	88	416,188	384,604	92	-10,421	-3	-31,584	-8	
TOTAL		9,821,702	8,000,480	81	-311,765	-3	-1,613,832	-16	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	52,068	18	-91	0	-12,416	-4	
TOTAL		289,670	52,068	18	-91	0	-12,416	-4	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

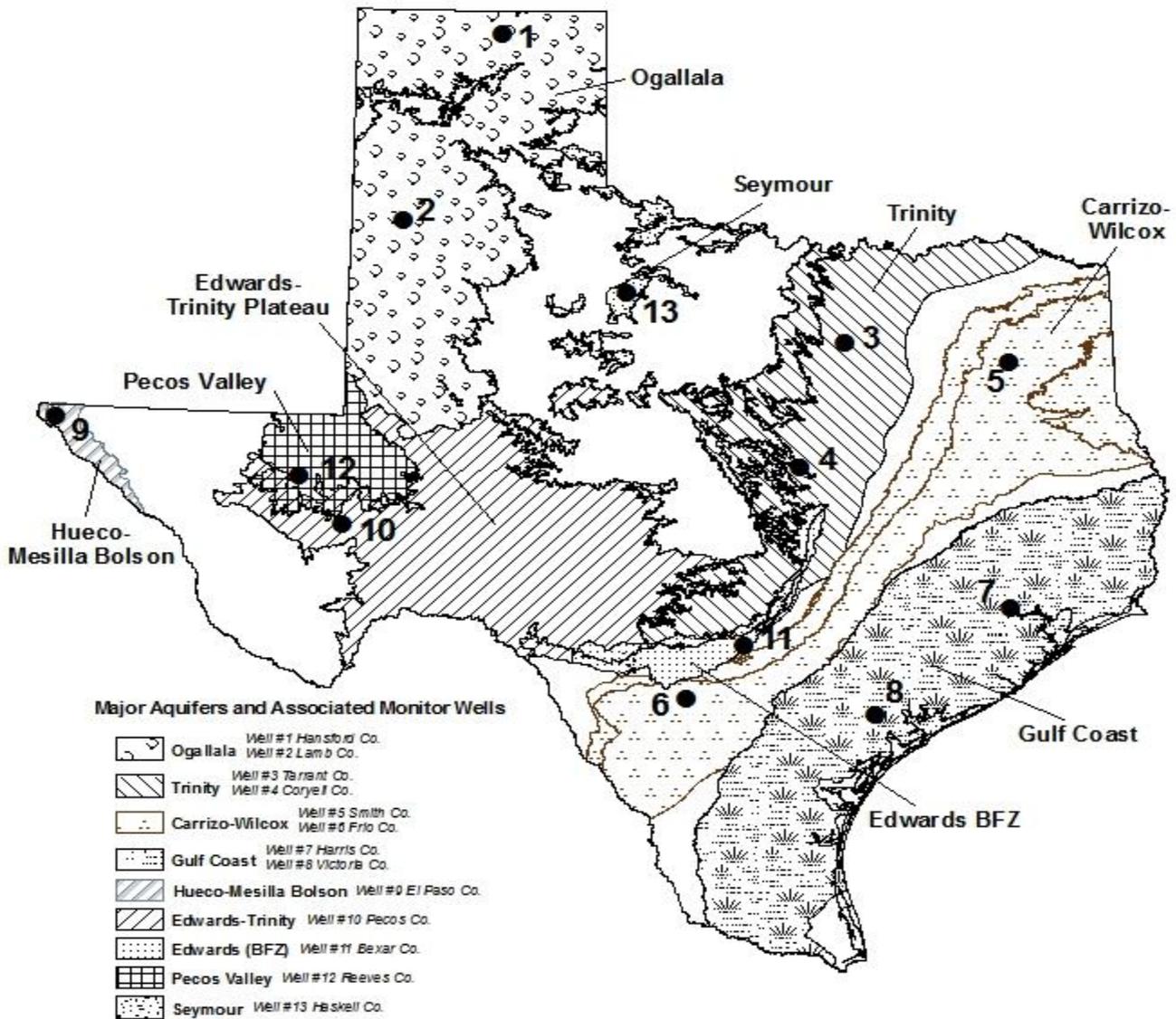
Name of Lake or Reservoir	No. on Map	Conservation Storage		Change since Late September 2010		Change since Late October 2009		
		Capacity (acre-feet)	Late Oct. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)
EDWARDS PLATEAU								
Oak Creek Reservoir	90	39,260	23,964	61	-797	-2	49	0
E V Spence Reservoir	91	517,272	19,838	4	-1,142	0	-7,434	-1
O C Fisher Lake	92	79,483	0	0	0	0	0	0
*O H Ivie Reservoir	93	554,335	191,737	35	-6,931	-1	-52,401	-9
Twin Buttes Reservoir	94	177,850	21,123	12	-1,023	-1	-7,350	-4
Brady Creek Reservoir	95	29,110	13,910	48	-697	-2	-1,294	-4
Buchanan, Lake	96	824,519	673,570	82	-8,981	-1	269,285	33
Lyndon B Johnson, Lake	97	113,323	111,561	98	-365	0	-586	-1
*Amistad Reservoir (Texas)	98	1,840,849	1,841,000	100	0	0	94,000	5
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	147,532	5
TOTAL		4,176,001	2,896,703	69	-19,936	0	294,269	7
SOUTH CENTRAL								
Travis, Lake	99	1,113,255	906,923	81	-29,209	-3	311,671	28
*Austin, Lake	100	21,804	21,062	97	181	1	121	1
Somerville Lake	101	147,104	131,263	89	-5,918	-4	-15,841	-11
Canyon Lake	102	378,781	376,490	99	-2,291	-1	86,501	23
Medina Lake	103	254,823	182,951	72	-5,399	-2	119,532	47
*Coletto Creek Reservoir	104	31,040	30,406	98	-634	-2	2,346	8
TOTAL		1,946,807	1,649,095	85	-43,270	-2	504,330	26
UPPER COAST								
Houston, Lake	105	128,863	127,400	99	-1,463	-1	-1,463	-1
Texana, Lake	106	153,246	140,615	92	-10,889	-7	-12,081	-8
TOTAL		282,109	268,015	95	-12,352	-4	-13,544	-5
SOUTHERN								
Choke Canyon Reservoir	107	695,262	579,936	83	-16,365	-2	101,699	15
Corpus Christi, Lake	108	256,961	241,423	94	-10,479	-4	165,554	64
*Falcon Reservoir (Texas)	109	1,551,034	1,613,000	104	62,000	4	620,000	40
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,646,817	100	0	0	935,817	35
TOTAL		2,503,257	2,434,359	97	35,156	1	887,253	35
STATE TOTAL		31,145,404	25,413,831	82	-599,911	-2	-372,058	-1

* Conservation volume is used as conservation storage capacity because the dead storage is unknown.

Note

Conservation storage capacity is the space available to store water above the lowest outlet and below the top of conservation pool, or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level), or any water in the dead storage. Conservation storage percentage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir on date shown. Percent change is given by $100 \times (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$. Figures shown are for the Texas share of conservation storage in all reservoirs.

GROUNDWATER LEVELS IN OBSERVATION WELLS



October, 2010

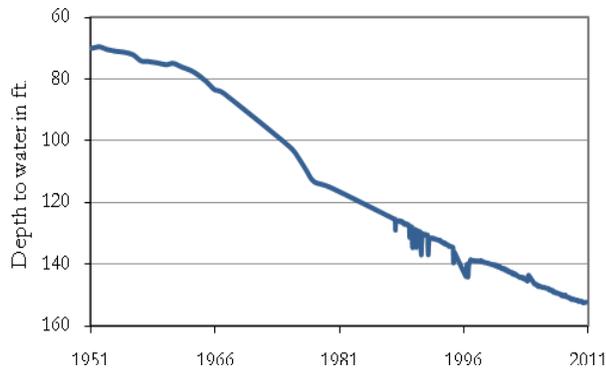
Water level measurements were available for all thirteen key monitoring wells. Water levels rose in six of the thirteen monitoring wells since the beginning of October ranging from 0.17 feet in the Hansford County Ogallala Aquifer well to 3.25 feet in the Pecos County Edwards Trinity Aquifer well. Water levels declined in the remaining monitoring wells, ranging from 0.02 feet in the Smith County Carrizo-Wilcox Aquifer well to 12.47 feet in the Frio County Carrizo-Wilcox Aquifer well. The J-17 well in San Antonio recorded a water level of 55.35 feet below land surface, 4.59 feet below last month's measurement. This water level is 15.65 feet above the Stage 1 critical management level.

	(1) Hansford 0354301	(2) Lamb 1053602	(3) Tarrant 3215504	(4) Coryell 4035404	(5) Smith 3430907	(6) Frio 7708803	(7) Harris 6514409	(8) Victoria 8017502	(9) El Paso 4913301	(10) Pecos 5216802	(11) Bexar 6837203	(12) Reeves 4644501	(13) Haskell 2135748
October 2010	152.06	138.83	449.23	482.44	435.23	438.05	198.67	32.76	291.25	204.88	55.35	147.30	44.39
September 2010	152.23	138.59	N/A	480.94	435.21	425.58	199.14	33.02	290.35	208.13	50.76	147.59	44.98
Month Change	0.17	-0.24	N/A	-1.50	-0.02	-12.47	0.47	0.26	-0.9	3.25	-4.59	0.29	0.59
Year Change	-0.45	-1.69	-0.43	-3.4	-1.74	-16.4	N/A	1.75	-0.18	4.64	6.88	2.36	0.49
Historical Change	-81.94	-110.68	-71.23	-190.44	-69.23	-158.05	-63.17	1.24	-59.35	42.00	-8.71	-55.21	-3.06

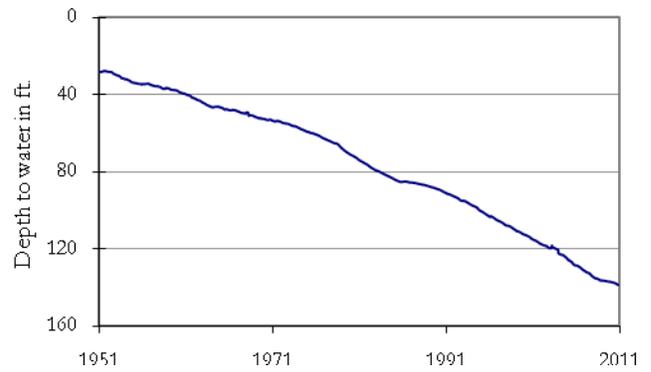
* ID is used in this publication to differentiate between the monitoring well number (1 - 13) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

OCTOBER GROUNDWATER LEVELS IN OBSERVATION WELLS

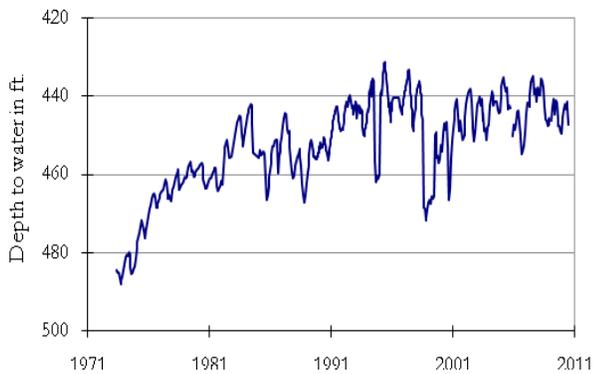
(1) State Well ID 03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



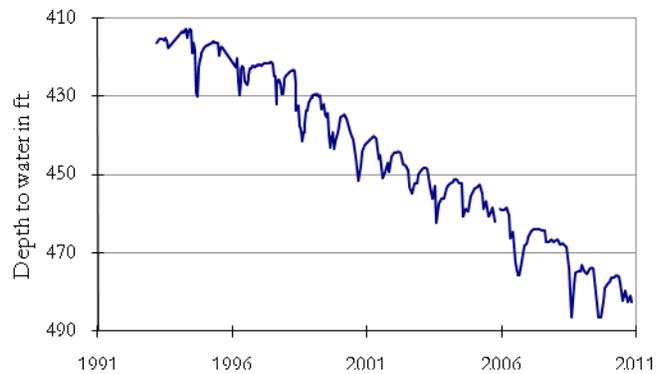
(2) State Well ID 10-53-602
Near Earth, Lamb County
Ogallala Aquifer



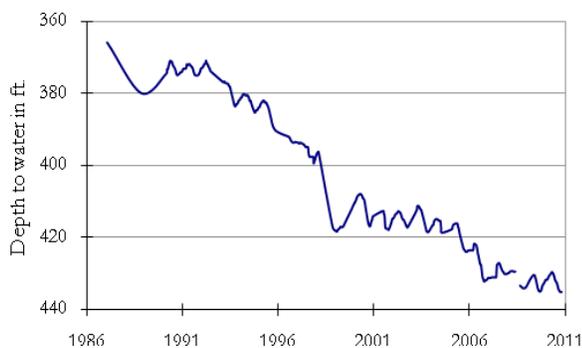
(3) State Well ID 32-15-504
Near Hurst, Tarrant County
Paluxy Formation-Trinity Aquifer



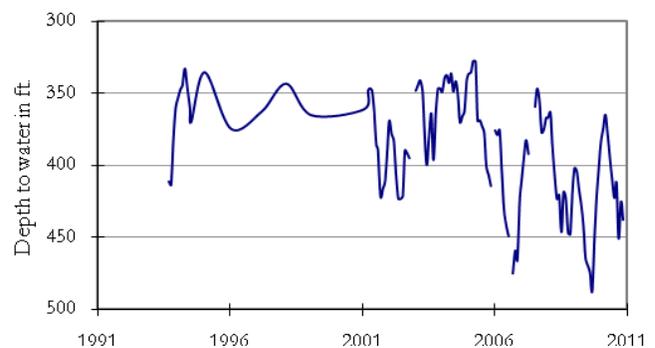
(4) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



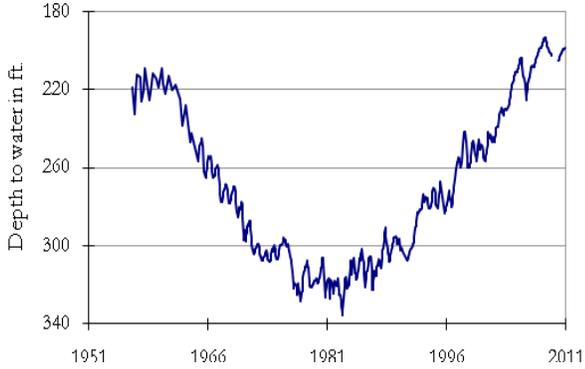
(5) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



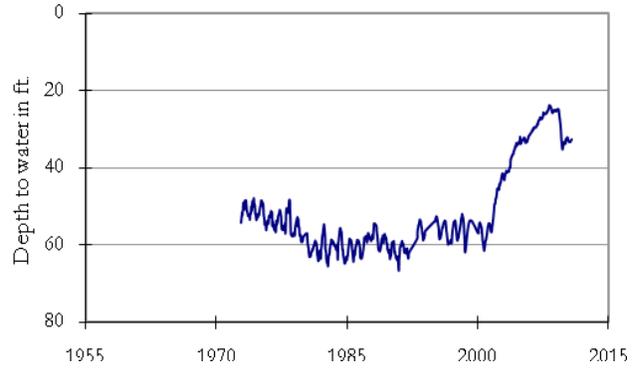
(6) State Well ID 77-08-803
Pearsall, Frio County
Carrizo-Wilcox Aquifer



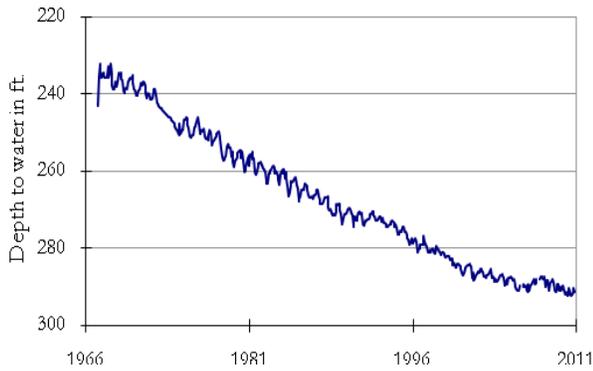
(7) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer



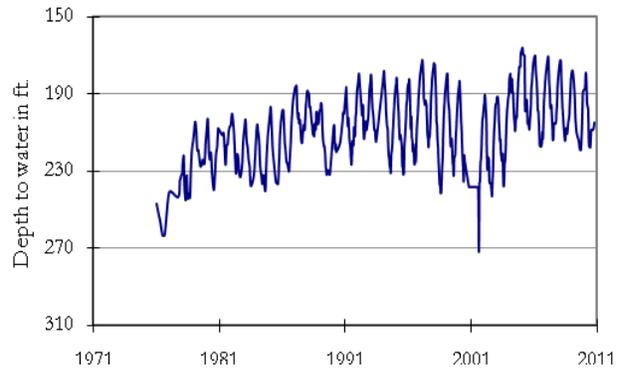
(8) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



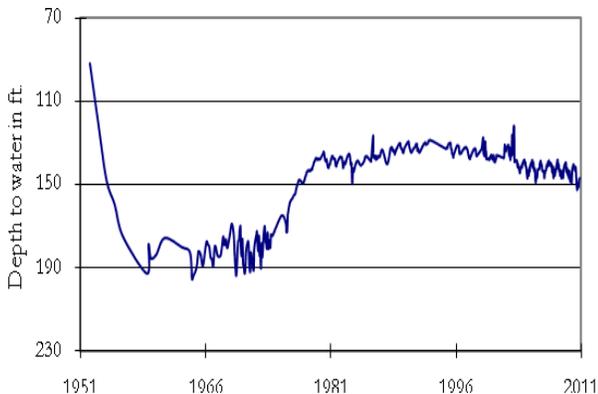
(9) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



(10) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



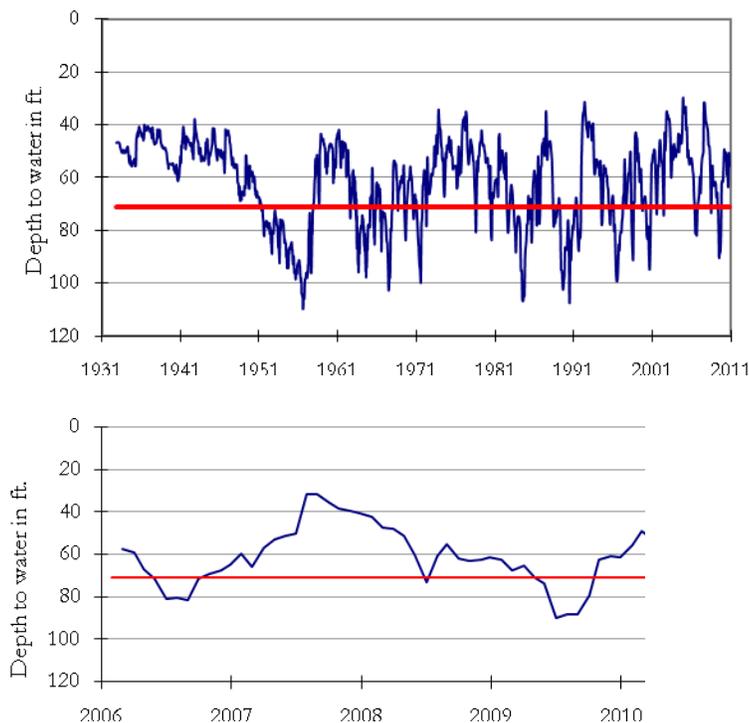
(12) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



(13) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



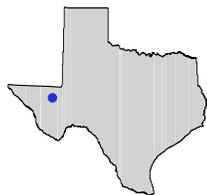
**(11) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late October water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 55.35 feet below land surface. This was 4.59 feet below last month's measurement, 6.88 feet above last year's measurement, and 8.71 feet below the initial measurement recorded in 1932.

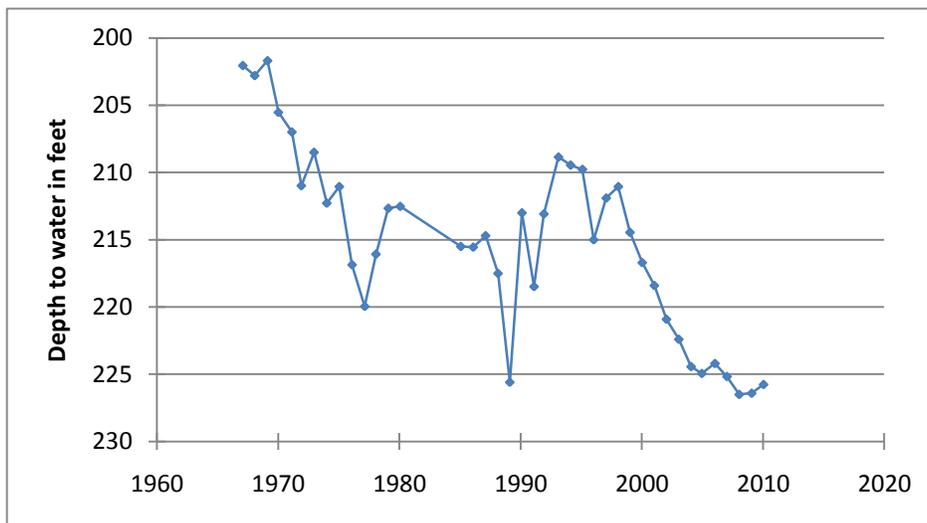
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

HYDROGRAPH OF THE MONTH



Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

**State Well I
D 48-07-418**



This Bone Spring Aquifer water level observation well is located 2 miles west of Dell City at an elevation of 3,805 feet above sea level. Water level decline in the Bone Spring-Victorio Peak Aquifer, mainly a result of irrigation pumpage that began in the late 1940s, has been exacerbated by occasional droughts. The chart of this water level monitor well indicates a primarily declining water level in the aquifer west of Dell City since the late 1960s.

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